

What is claimed is:

5 1.A data reproduction device for reproducing  
compressed multimedia data, including audio data,  
comprising:

an extraction unit extracting a frame, which is  
unit data of the audio data;

10 a conversion unit thinning out the frame of the  
audio data or repeatedly outputting the frame; and

a reproduction unit decoding the frame of the  
audio data received from the conversion unit and  
reproducing voice.

15 2.A data reproduction device for reproducing  
compressed multimedia data, including audio data and  
also converting reproduction speed without decoding  
compressed audio data, comprising:

20 an extraction unit extracting a frame, which is  
unit data of the audio data;

a setting unit setting the reproduction speed  
of the audio data;

25 a speed conversion unit thinning out the frame  
of the audio data or repeatedly outputting the frame;  
and

a reproduction unit decoding the frame of the audio data received from the speed conversion unit and reproducing voice.

5        3.The data reproduction device according to claim 2, wherein the audio data are MPEG audio data.

4. The data reproduction device according to claim 3, further comprising:

10            a scale factor extraction unit extracting a scale factor included in the frame;

             a calculation unit calculating the scale factor;  
and

             a control unit comparing a calculation result  
15        of the calculation unit with a prescribed threshold value and controlling not to transmit a corresponding frame to said reproduction unit if the calculation result is smaller than the threshold value.

20        5.The data reproduction device according to claim 4, wherein said calculation unit calculates total of a plurality of scale factors included in the frame.

25        6.The data reproduction device according to claim 4, further comprising:

a scale factor conversion unit generating a scale factor conversion coefficient for compensating for a discontinuous fluctuation of an acoustic pressure caused in a joint between frames, calculating the scale factor and scale factor conversion coefficient and inputting them as data to be decoded to said reproduction unit if a plurality of scale factors included in the frame are reproduced by said reproduction unit.

7.The data reproduction device according to claim 2, which receives multimedia data, including both video data and audio data, further comprising:

a separation unit breaking down the multimedia data into both video data and audio data;  
a decoding unit decoding the video data; and  
a video reproduction unit reproducing the video data.

8.The data reproduction device according to claim 7, wherein each piece of the video data and audio data is structured as MPEG data.

9.A method for reproducing multimedia data, including audio data and converting a reproduction speed without

decoding compressed audio data, comprising:

(a) extracting a frame, which is unit data of the audio data;

5 (b) setting the reproduction speed of the audio data;

(c) thinning out the frame of the audio data or repeatedly outputting the frame based on the reproduction speed set in step (b); and

10 (d) decoding the frame of the audio data received after step (c) and reproducing voice.

10. The data reproduction method according to claim 9, wherein the audio data are MPEG audio data.

15 11. The data reproduction according to claim 10, further comprising:

(e) extracting a scale factor included in the frame;

(f) calculating the scale factor; and

20 (g) comparing a calculation result in step (f) with a prescribed threshold value and controlling not to execute step (d) for a corresponding frame if the calculation result is smaller than the threshold value.

25 12. The data reproduction method according to claim 11,

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wherein in step (f), total of a plurality of scale factors included in the frame is calculated

13.The data reproduction method according to claim 11,  
5 further comprising

(h)generating a scale factor conversion coefficient for compensating for a discontinuous fluctuation of an acoustic pressure caused at a joint between frames and executing step (d) based on a value  
10 obtained by multiplying the scale factor by the scale factor conversion coefficient if a plurality of scale factors included in the frame are reproduced in step (d).

14.The data reproduction method for processing multimedia data, including both video data and audio data, according to claim 9, further comprising:

(i)separating video data from audio data;

(j)decoding the video data; and

20 (k)reproducing the video data.

15.The data reproduction method according to claim 14, wherein each of the video data and audio data is structured as MPEG data.

16.A computer-readable storage medium, on which is recorded a program for enabling a computer to reproduce multimedia data, including audio data by converting reproduction speed of compressed audio data without decoding the data, said process comprising:

(a) extracting a frame, which is data unit of the audio data;

(b) setting reproduction speed of the audio data ;

(c) thinning out the frame of the audio data or repeatedly outputting the frame based on the reproduction speed set in step (b); and

(d) decoding the frame of the audio data received after step (c).

17.The storage medium according to claim 16, wherein the audio data are MPEG audio data.

18.The storage medium according to claim 17, further comprising:

(e) extracting a scale factor included in the frame;

(f) calculating the scale factor; and

(g) comparing a calculation result in step (f) with a prescribed threshold value and controlling not to execute step (d) for a corresponding frame if the

calculation result is smaller than the threshold value .

19. The storage medium according to claim 18, wherein  
in step (f), a plurality of scale factors included in  
5 the frame is totaled.

20. The storage medium according to claim 18, further  
comprising

10 (h) generating a scale factor conversion  
coefficient for compensating for a discontinuous  
fluctuation of an acoustic pressure caused at a joint  
between frames and executing step (d) based on a value  
obtained by multiplying the scale factor by the scale  
factor conversion coefficient if a plurality of scale  
15 factors included in the frame are reproduced in step  
(d) .

21. The storage medium for processing multimedia data,  
including both video and audio data, according to claim  
20 16, further comprising:

(i) separating video data from audio data;

(j) decoding the video data; and

(k) reproducing the video data.

25 22. The storage medium according to claim 21, wherein

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each of the video data and audio data is structured as MPEG data.

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